REMARKS

Reconsideration and allowance are respectfully requested in light of the above amendments and the following remarks.

Claims 1 and 7-10 have been canceled in favor of new claims 12-15. Claims 2-6 and 11 have been amended to depend from the new claims and for clarity. Claims 12 and 13-15 recite features corresponding to those of original claims 1 and 8-10, respectively. Support for the features newly recited in claims 12-15 is provided in Fig. 3 and the specification on page 7, line 10, through page 8, line 1.

Claims 8-11 were rejected, under 35 USC §102(e), as being anticipated by Hamabe (US 6,405,021). Claims 1-7 were rejected, under 35 USC §103(a), as being unpatentable over Hamabe in view of Schmidl et al. (US 6,404,826). To the extent these rejections are deemed applicable to the amended claims, Applicants respectfully traverse.

New claim 12 recites:

> *A base station apparatus comprising:*
> *a signal to interference ratio calculator that calculates a signal to interference ratio using a value obtained by averaging interference signal power for several slot times;*
> *a reference value decider that decides whether the calculated signal to interference ratio is greater than a reference value or not; and*
> *a transmit power control information creator that creates transmit power control information to instruct either an increase or decrease of transmit power based*

on the number of slots used to calculate the averaged interference signal power and the decision result of said reference value decider, wherein:

when the number of slots used to calculate the averaged interference signal power equals or exceeds a predetermined number, the transmit power control information creator creates the transmit power control information based on the decision result of the reference value decider, and

when the number of slots used to calculate the averaged interference signal power is less than the predetermined number, regardless of the decision result of the reference value decider, the transmit power control information creator creates the transmit power control information so as not to allow a transmit power level to fall below a predetermined level.

As may be seen by examination of claim 12, a feature of the presently claimed base station is the control it exerts over a mobile station apparatus, which has just established a radio connection with the base station, such that the mobile station does not decrease its transmit power until the signal interference level for the mobile station apparatus can be measured correctly. The advantage provided by this feature is that the base station will receive high quality signals from the mobile station during a handover, thereby enabling efficient handover and communication.

The combined teachings of Hamabe and Schmidl fail to suggest the features recited in claim 12 wherein: (1) a transmit power control information creator creates transmit power control information based on a decision result of a reference value

decider, when the number of slots used to calculate an averaged interference signal power equals or exceeds a predetermined number and (2) the transmit power control information creator creates the transmit power control information so as not to allow a transmit power level to fall below a predetermined level, when the number of slots used to calculate the averaged interference signal power is less than the predetermined number, regardless of the decision result of the reference value decider.

In contrast to these features, Hamabe discloses in Figs. 7 and 11 a pair of base stations 10a and 10b communicating with a mobile station 30b during a soft handover operation. Each of base stations 10a and 10b measures a signal to interference ratio (SIR) of a received time slot signal communicated by mobile station 30b and compares the measured SIR to a target SIR (Hamabe col. 14, lines 13-18). If the measured SIR is less than the target SIR, a transmission power controller 15 of the respective base station produces a command for instructing mobile station 30b to increase its transmission power (col. 14, lines 28-32). On the other hand, if the measured SIR equals or exceeds the target SIR, the transmission power controller of the respective base station produces a command for instructing mobile station 30b to decrease its transmission power (col. 14, lines 32-36). Each of base stations 10a and 10b communicates its respectively

produced transmission power command to mobile station 30b (col. 14, lines 36-38). If the received transmission power commands differ from each other, then mobile station 30b controls its transmission power in accordance with the command for reducing the transmission power (col. 16, lines 27-30).

In short, Hamabe discloses reducing the transmission power of a mobile station involved in a soft handover operation when the mobile station receives conflicting power control commands from the base stations participating in the handover operation. Otherwise, the mobile station changes its transmission power in accordance with the unanimous command.

Schmidl discloses in Fig. 1 a communication apparatus that creates a transmission power control (TPC) command based upon an average value of received signal strength indicators (RSSIs) and an interference signal strength indicator (ISSI) (Schmidl col. 4, lines 16-37). The created TPC command is then communicated to a base station for use in controlling the transmission power of the base station (col. 4, lines 40-42).

Hamabe and Schmidl do not suggest determining the number of received time slots used for calculating an averaged interference signal power and using this determination to regulate the value of a transmit power control command, in accordance with claim 12. Moreover, Hamabe and Schmidl do not suggest preventing a mobile

station's transmit power level from falling below a predetermined level when the number of slots is less than a predetermined number, in accordance with claim 12. Furthermore, Hamabe and Schmidl do not suggest creating transmit power control information based on a comparison of an average signal to interference ratio, of received signals, with a reference value when the number of slots equals or exceeds the predetermined number, in accordance with claim 12.

In accordance with the above discussion, Applicants submit that the combined teachings of Hamabe and Schmidl do not teach or suggest the subject matter defined by claim 12. Therefore, allowance of claim 12 and all claims dependent therefrom is warranted.

Regarding claim 2, the Office Action proposes that Schmidl teaches creating a TPC command for increasing transmission power when the number of received time slots is less than a particular number (Office Action page 5, last line, through page 6, line 3). The Office Action bases this conclusion on the reasoning that: (1) a particular number of time slots must be received to calculate the ISSI and average RSSI values used to generate the signal to interference ratio (SIR) that regulates the TPC command (page 6, lines 3-5) and (2) a variation of the generated SIR may be caused by calculating an average RSSI value with too few

individual RSSI measurements from the received time slots (e.g., an average RSSI value calculated by summing only two individual RSSI values that have been received and dividing this sum by a number greater than two, which number represents the intended number of individual RSSI values to be summed) (Office Action page 6, lines 5-7).

Applicants respectfully submit that Schmidl discloses neither how nor whether a TPC command is created when too few symbols have been received to calculate an average RSSI value. The Office Action proposes that this teaching is provided by Schmidl in col. 4, lines 33-42. However, as may be determined by examination of the cited portion, Schmidl is completely silent on this subject. Schmidl only teaches how a TPC command is created for the case where enough symbols have been received to calculate an average of the received RSSI values. Since Schmidl is silent as to how or whether the TPC command is created when too few symbols have been received, there is no basis for concluding that a TPC command is created or that it commands an increase of the transmission power in this situation. As a result, the Office Action's conclusion that Schmidl teaches creating a TPC command to increase transmission power when the number of received slots is less than a threshold value is not supported by the evidence.

Accordingly, the combined teachings of Hamabe and Schmidl do not suggest the subject matter defined by claim 2. Therefore, allowance of claim 2 is warranted for this independent reason.

With regard to claim 3, the Office Action proposes that the claimed features of (1) a count of transmit power control information instructing an increase in transmission power and (2) a count of transmit power control information instructing a decrease in transmission power are both analogous to Hamabe's disclosed target SIR (Office Action page 6, last four lines). Applicants respectfully submit that this construction is unmerited.

A target SIR is not a count of anything, rather it is an established value that is desired to be achieved. And Hamabe's disclosure does not use the phrase target SIR in a way that conflicts with its ordinary meaning. Similarly, Applicants do not use the word count in their disclosure in a way that conflicts with its ordinary meaning. As may be determined by reference to a dictionary, the ordinary meanings of the words count and target, as used in the context of their respective disclosures, would not be confused for one another by one of ordinary skill in the art.

Accordingly, the applied references do not teach or suggest the subject matter defined by claim 3. Therefore, allowance of claim 3 is warranted for this independent reason.

Regarding claim 4, the Office Action proposes that there will be times when the base station disclosed by Schmidl will measure a SIR that is greater than the target SIR and this event will occur immediately subsequent to measuring an SIR that is less than the target SIR (Office Action page 7, lines 10-13). The Office Action further proposes that this sequence of measurements will cause Schmidl's base station to create a sequence of TPC commands having opposite values (page 7, lines 13-14).

Assuming, *arguendo*, that Schmidl's base station does create the proposed sequence of oppositely valued TPC commands, occasionally, the occurrence of this sequence is not dictated by the structure of Schmidl's base station but, instead, is governed by external influences. Applicants recite in claim 4 a base station whose structure must necessarily create the sequence of oppositely valued commands under the conditions recited in claim 4. The claimed structure produces a command having a causal relationship to the previously produced command. The occurrence of the sequence described in the Office Action is a serendipitous occurrence that is not governed by a causal relationship between

the two commands of the sequence or a structure capable of implementing the causal relationship.

Simply put, Applicants claim a structure whose components cooperate to produce the sequence of oppositely valued commands at all times when the specifically recited conditions exist. Schmidl does not disclose a structure whose components cooperate to produce the sequence of oppositely valued commands at all times when the specific conditions exist.

Accordingly, Applicants submit that the teachings of the applied references do not suggest the subject matter defined by claim 4. Therefore, allowance of claim 4 is warranted for this independent reason.

New claim 13 recites:

> *A closed loop transmit power control method whereby a base station apparatus transmits transmit power control information to a communication terminal apparatus and the communication terminal apparatus sets transmit power based on the transmit power control information, the method comprising having the base station apparatus create transmit power control information instructing an increase of transmit power until the base station apparatus can correctly estimate interference signal power against a signal sent from a communication terminal apparatus with which a new radio connection has been established.*

Hamabe fails to disclose the feature recited in claim 13 wherein a base station apparatus creates transmit power control information instructing an increase of transmit power until the

base station apparatus can correctly estimate interference signal power against a signal sent from a communication terminal apparatus with which a new radio connection has been established. The Office Action proposes that Hamabe discloses this feature in col. 14, lines 45-51, and col. 16, lines 24-30 (Office Action page 2, last paragraph).

However, the cited portion of Hamabe does not support the Office Action's proposal. The cited portion of Hamabe was presented in the discussion above, but will be repeated below for ease of reference.

Hamabe discloses in Figs. 7 and 11 a pair of base stations 10a and 10b communicating with a mobile station 30b during a soft handover operation. Each of base stations 10a and 10b measures a signal to interference ratio (SIR) of a received time slot signal communicated by mobile station 30b and compares the measured SIR to a target SIR (Hamabe col. 14, lines 13-18). If the measured SIR is less than the target SIR, a transmission power controller 15 of the respective base station produces a command for instructing mobile station 30b to increase its transmission power (col. 14, lines 28-32). If the measured SIR equals or exceeds the target SIR, the transmission power controller of the respective base station produces a command for instructing mobile station 30b to decrease its transmission power (col. 14, lines

32-36). Each of base stations 10a and 10b communicates its respectively produced transmission power command to mobile station 30b (col. 14, lines 36-38). If the transmission power commands differ from each other, then mobile station 30b controls its transmission power in accordance with the command for reducing the transmission power (col. 16, lines 27-30).

Simply put, Hamabe discloses reducing the transmission power of a mobile station involved in a soft handover operation when the mobile station receives conflicting power control commands from the base stations participating in the handover operation. Otherwise, the mobile station changes its transmission power in accordance with the unanimous command.

Hamabe provides absolutely no disclosure of instructing an increase of transmit power until a base station apparatus can correctly estimate interference signal power against a signal sent from a communication terminal apparatus with which a new radio connection has been established. Due the absence of such a disclosure, the Office Action presents numerous presumptions that might induce Hamabe's base station to operate according the method of claim 13. Although, presumptions of how a proposed anticipatory structure might operate under particular circumstances do not satisfy the requirements for establishing a

prima facie case of anticipation, Applicants will nevertheless address them.

The Office Action proposes that Hamabe's auxiliary base station will not be able to correctly estimate the SIR of a mobile station's transmission signal until the mobile station is in an area solely served by the auxiliary base station. Applicants submit that Hamabe does not disclose the operational aspect of the Office Action's statement and further submit that there is no evidentiary basis supporting the soundness of the statement. The Office Action appears to be proposing that a signal having sufficient power for a receiver to recover the information communicated by the signal does not necessarily have sufficient power to be discriminated from the noise of the channel in which the signal was transmitted, when the discrimination is made for the purpose of measuring the signal's SIR. Applicants respectfully disagree and submit that there is no basis for this apparent proposal in science.

The Office Action additionally proposes that Hamabe discloses conducting a soft handoff operation when both base stations transmit TPC information corresponding to an increase in the reverse link (Office Action page 2, last two lines). However, Hamabe does not disclose a causal relationship between (1) two base stations transmitting TPC commands requesting a

transmission power increase and (2) the initiation of a handover operation. Hamabe also does not disclose a casual relationship for the opposite sequence of events.

Simply put, Hamabe does not disclose how or whether TPC commands are created during a period when the interference signal power cannot be correctly measured. As a result, it necessarily follows that Hamabe cannot disclose creating a TPC command requesting an increase in transmission power for this situation.

Accordingly, Applicants submit that Hamabe does not anticipate the subject matter defined by claim 13. Therefore, allowance of claim 13 and all claims dependent therefrom is warranted.

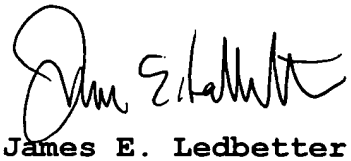
New claims 14 and 15 recite features similar to those distinguishing apparatus claims 3 and 4, respectively, from Hamabe, but with respect to method claims. For the same reasons these features distinguish claims 3 and 4 from Hamabe, so too do they distinguish claims 14 and 15. Therefore allowance of claims 14 and 15 is warranted.

In view of the above, it is submitted that this application is in condition for allowance and a notice to that effect is respectfully solicited.

If any issues remain which may best be resolved through a telephone communication, the Examiner is requested to telephone

the undersigned at the local Washington, D.C. telephone number listed below.

Respectfully submitted,



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